

The FY 2001 Joint CLIVAR/PACS-GEWEX/GAPP North American Warm Season Precipitation Initiative

Program Objectives

The overall goal of the CLIVAR/PACS-GEWEX/GAPP North American Warm Season Precipitation Initiative is to determine the sources and limits of predictability of warm season precipitation over North America, with emphasis on time scales ranging up to seasonal-to-interannual. The initiative's principal objectives include (1) a better understanding of the key components of the North American monsoon system and its temporal and spatial variability, (2) a better understanding of the role of this system in the global water cycle and regional climate variability, and (3) improved simulation and intraseasonal-to-interannual prediction of the monsoon and regional water resources.

Funding Availability

NOAA will have an estimated \$1 million available for projects in the priority areas listed below. The actual program funding level will be determined based on the FY 2001 appropriation for the NOAA Climate and Global Change Program.

Research Priorities

For FY 2001, the NOAA program will focus on variability and predictability of summer climate over North America across the range of continental, regional and local scales of the monsoon circulation. Work is envisioned to proceed in parallel at all three scales.

At the continental scale, the focus is on an improved description and understanding of the spatial and temporal linkages between warm season precipitation, circulation patterns, and the dominant boundary forcing parameters. Emphasis is placed on the relationship of the evolving warm season precipitation regime over North America to the seasonal evolution of oceanic and land surface boundary conditions; the relationship of interannual variations in the boundary conditions, the atmospheric circulation, and the continental hydrologic regime; the correlation between the anomaly-sustaining atmospheric circulation and the land and ocean surface boundary conditions that characterize precipitation and temperature anomalies during the summer; the links between the strength of the summer monsoon in southwestern North America and summertime precipitation over the central United States; and the relationship between statistical frequency and magnitude of extreme events (e.g. floods, droughts, hurricanes) and climate variability on intraseasonal-to-interannual time scales.

At the regional scale, the focus is on an improved description and understanding of intraseasonal aspects of the monsoon. Key features and relationships to be investigated at this scale include the role of the Great Plains low level jet (GPLLJ) and the Gulf of California low level jet (GCLLJ) on summer precipitation and hydrology; the mechanisms, including atmospheric dynamic, thermodynamic, and land and ocean surface influences, responsible for the GPLLJ and GCLLJ and their modulation on

seasonal to interannual times scales; the interactions between tropical easterly waves and the LLJs and associated moisture surges; the relationship between the Madden-Julian Oscillation, tropical cyclone activity, and monsoon precipitation; the role of the intertropical convergence zone/cold tongue complex and the warm pool region to the southwest of Mexico; and the bimodal distribution in warm season precipitation over Mexico and Central America.

At the local scale, the focus is on aspects of the low-level circulation and precipitation patterns in the core monsoon region. Principal research areas include the relative roles of local variations in sea surface temperature and land-surface parameters (topography, soil moisture, and vegetation cover) in modulating precipitation; the dominant source of precipitable moisture for monsoon precipitation; and the relationship of sea breeze/land breeze and mountain/valley circulations along the Gulf of California and the diurnal cycle of moisture and convection.

To meet the initiative's objectives, research will include a mix of diagnostic studies, process studies and model and empirical prediction studies. Limited funding is available for enhanced observations. Intensive field campaign observations are anticipated in future years.

The research priorities above derive from the draft North American Monsoon Experiment (NAME) Science and Implementation, the draft CLIVAR Science and Implementation Plan and the GAPP Science Plan. Interested investigators are encouraged to review the draft NAME plan available online at <http://www.cpc.ncep.noaa.gov/products/precip/monsoon/NAME.html>

For further information on program priorities contact either the CLIVAR/PACS program manager, Michael Patterson (michael.patterson@noaa.gov) or the GEWEX/GAPP program manager, Rick Lawford (richard.lawford@noaa.gov), or the GEWEX/ GAPP program specialist Benjamin Felzer (felzer@ogp.noaa.gov), NOAA/Office of Global Programs, 1100 Wayne Avenue, Suite 1210, Silver Spring, MD 20910; 301-427-2089.

Schedule for Submission, Review, and Awards

The following deadlines for submission to this Announcement should be strictly followed.

Letters of intent must be received at OGP no later than Monday, November 13, 2000.

Full proposals must be received at OGP no later than Monday, January 22, 2001.

Applicants who have not received a response to their letter of intent by Monday, November 27, 2000 should contact Linda Prevas at, 301-427-2089 ext. 104, linda.prevas@noaa.gov. We anticipate that review of full proposals will occur during Spring, 2001, and funding should begin during Summer, 2001, for most approved projects. July 1, 2001, should be used as the proposed start date on proposals unless

otherwise directed by a program manager. Applicants should be notified of their status within 6 months of application. All proposals must be submitted in accordance with the guidelines below. Failure to heed these guidelines may result in proposals being returned without review.

Eligibility

Extramural eligibility is not limited and is encouraged with the objective of developing a strong partnership with the academic community. Universities, non-profit organizations, for profit organizations, State and local governments, and Indian Tribes, are included among entities eligible for funding under this announcement. The NOAA Climate and Global Change Program has been approved for multi-year funding up to a three year duration.

Letters of Intent

Letters of Intent (LOIs) should be no more than two pages in length and include a working title for the project, the name and institution of principal investigator(s), a statement of the problem, brief summary of work to be completed, and approximate cost of the project. Email submission of LOIs is preferred. Evaluation of the proposed project's relevance to FY 2001 priorities will be made by program management. It is in the best interest of applicants and their institutions to submit letters of intent; however, it is not a requirement. Projects deemed unsuitable during LOI review will not be encouraged to submit full proposals.

Proposal Submission

Proposals should be submitted to:
Office of Global Programs
National Oceanic and Atmospheric Administration
1100 Wayne Avenue, Suite 1210
Silver Spring, MD 20910-5603
Attn.: Linda Prevas

The guidelines for proposal preparation provided below are mandatory. Failure to heed these guidelines may result in proposals being returned without review.

Required Elements: All proposals should include the following elements:

- (1) **Signed title page:** The title page should be signed by the Principal Investigator (PI) and the institutional representative and should clearly indicate which project area is being addressed. The PI and institutional representative should be identified by full name, title, organization, mailing address, telephone number, fax number, and email address. The total amount of Federal funds being requested should be listed for each budget period.

- (2) **Abstract:** An abstract must be included and should contain an introduction of the problem, rationale and a brief summary of work to be completed. The abstract should appear on a separate page, headed with the proposal title, institution(s), investigator(s), total proposed cost and budget period.
- (3) **Results from prior research:** The results of related projects supported by NOAA and other agencies should be described, including their relation to the currently proposed work. Reference to each prior research award should include the title, agency, award number, PIs, period of award and total award. The section should be a brief summary and should not exceed two pages total.
- (4) **Statement of work:** The proposed project must be completely described, including identification of the problem, scientific objectives, proposed methodology, relevance to the PACS/GCIP priorities listed above, including how this work applies/contributes to understanding predictability or improving predictions, or to applications. Benefits of the proposed project to the general public and the scientific community should be addressed. Also, if appropriate, the proposal should indicate how the proposed work relates to any NOAA climate assessment or those funded by other agencies. A year-by-year summary of proposed work must be included clearly indicating that each year's proposed work is severable and can easily be separated into annual increments of meaningful work. The statement of work, including references but excluding figures and other visual materials, must not exceed 15 pages of text. Investigators wishing to submit group proposals that exceed the 15 page limit should discuss this possibility with the appropriate Program Manager prior to submission. In general, proposals from 3 or more investigators may include a statement of work containing up to 15 pages of overall project description plus up to 5 additional pages for individual project descriptions.
- (5) **Budget:** The proposal must include total and annual budgets corresponding with the descriptions provided in the statement of work. Additional text to justify expenses should be included as necessary. Federally required forms for budget information are described in the "other requirements" section below.
- (6) **Vitae:** Abbreviated curriculum vitae are sought with each proposal. Reference lists should be limited to all publications in the last three years with up to five other relevant papers.
- (7) **Current and pending support:** For each investigator, submit a list that includes project title, supporting agency with grant number, investigator months per annum, total project funding, duration, and status (either current or pending). Requested values should be listed for pending support.

Proposals submitted to the NOAA Climate and Global Change Program must include the original and two unbound copies of the proposal. Investigators are not required to submit more than 3 copies of the proposal, however, the normal

review process requires 20 copies. Investigators are encouraged to submit sufficient proposal copies for the full review process, particularly if they wish all reviewers to receive color, unusually sized (not 8.5x11"), or otherwise unusual materials submitted as part of the proposal. Proposals must be limited to 30 pages (numbered), including budget, investigators vitae, and all appendices, and should be limited to funding requests for one to three year duration. Appended information may not be used to circumvent the page length limit. Federally mandated forms are not included within the page count. Proposals should be sent to the NOAA Office of Global Programs at the above address. Facsimile transmissions and electronic mail submission of full proposals will not be accepted. Applicants may obtain a standard NOAA application kit online at <http://www.ogp.noaa.gov/grants/appkit.htm>.

Evaluation Criteria

Consideration for financial assistance will be given to those proposals that meet the following evaluation criteria:

- (1) **Scientific Merit:** Intrinsic scientific value of the subject and the study proposed, including methodology and readiness.
- (2) **Relevance:** Importance and relevance to the objectives of the joint CLIVAR-GEWEX initiative.

Selection Procedures

All proposals will be evaluated and ranked using the criteria above by (1) independent peer mail review, and/or (2) independent peer panel review. Both NOAA and non-NOAA experts in the field may be used in this process. The program managers do not participate in the scoring of proposals by the independent peer panel. The panel recommendations and evaluations will be considered by the program manager in final selections. Those proposals ranked by the panel as not recommended for funding will not be given further consideration and will be notified of non selection. For the proposals rated either Excellent, Very Good or Good, the Program Manager will: (a) ascertain which proposals meet the program priorities, and do not substantially duplicate other projects that are currently funded by NOAA or are approved for funding by other federal agencies (hence, awards may not necessarily be made to the highest-scored proposals), (b) select the proposals to be funded, (c) determine the total duration of funding for each proposal, and (d) determine the amount of funds available for each proposal.

Unsatisfactory performance by a recipient under prior Federal awards may result in an application not being considered for funding.

Federal Form Requirements

The following federal forms are required by non-Federal applications. Applicants employed by the Federal Government need not submit these forms.

Only three copies of the set of forms are necessary. For ease in processing, it is preferable for each set of forms to be separate from the copies of the proposal. The forms do not count in the total page number limit for the proposal.

- (1) **Application** - Applicants must submit a Standard Form 424 (4-92) "Application for Federal Assistance", including a detailed budget using the Standard Form 424a (4 - 92), "Budget Information -- Non-Construction Programs", and Standard Form 424b (4 - 92). The forms are included in the standard NOAA application kit.
- (2) **Primary Applicant Certification** - All primary applicants must submit a completed Form CD 511, "Certification Regarding Debarment, Suspension and Other Responsibility Matters; Drug Free Workplace Requirements and Lobbying". Applicants are also hereby notified of the following:
 - (a) **Nonprocurement Debarment and Suspension** - Prospective participants (as defined at 15 CFR Part 26, section 105) are subject to 15 CFR Part 26, "Nonprocurement Debarment and Suspension," and the related section of the certification form prescribed above applies;
 - (b) **Drug Free Workplace** - Grantees (as defined at 15 CFR part 26, section 605) are subject to 15 CFR Part 26, Subpart F, "Governmentwide Requirements for Drug-Free Workplace (Grants)" and the related section of the certification form prescribed above applies;
 - (c) **Anti-Lobbying** - Persons (as defined at 15 CFR Part 28, section 105) are subject to the lobbying provisions of 31 U.S.C. 1352, "Limitation on use of appropriated funds to influence certain Federal contracting and financial transactions", and the lobbying section of the certification form prescribed above applies to applications/bids for grants, cooperative agreements, and contracts for more than \$100,000, and loans and loan guarantees for more than \$150,000, or the single family maximum mortgage limit for affected programs, whichever is greater; and
 - (d) **Anti-Lobbying Disclosures** - Any applicant that has paid or will pay for lobbying using any funds must submit an SF-LLL, "Disclosure of Lobbying Activities," as required under 15CFR part 28, appendix B.
- (3) **Lower Tier Certifications** - Recipients must require applicants/bidders for subgrants, contracts, subcontracts, or lower tier covered transactions at any tier under the award to submit, if applicable, a completed Form CD-512, "Certifications Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions and Lobbying" and disclosure form SF LLL, "Disclosure of Lobbying Activities." Form CD-512 is intended for the

use of recipients and should not be transmitted to DOC. SF-LLL submitted by any tier recipient or subrecipient should be submitted to DOC in accordance with the instructions contained in the award document.

Other Considerations

Recipients and subrecipients are subject to all applicable Federal laws and Federal and Department of Commerce policies, regulations, and procedures applicable to Federal financial assistance awards.

Preaward Activities - If applicants incur any costs prior to an award being made, they do so solely at their own risk of not being reimbursed by the Government. Notwithstanding any verbal assurance that may have been received, there is no obligation to the applicant on the part of Department of Commerce to cover pre-award costs.

This program is subject to the requirements of OMB Circular No. A-110, "Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations", and 15 CFR Part 24, "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments", as applicable. Applications under this program are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

All non-profit and for-profit applicants are subject to a name check review process. Name checks are intended to reveal if any key individuals associated with the applicant have been convicted of, or are presently facing criminal charges such as fraud, theft, perjury, or other matters which significantly reflect on the applicant's management, honesty, or financial integrity.

A false statement on an application is grounds for denial or termination of funds and grounds for possible punishment by a fine or imprisonment as provided in 18 U.S.C. 1001.

No award of Federal funds shall be made to an applicant who has an outstanding delinquent Federal debt until either:

- (1) the delinquent account is paid in full,
- (2) a negotiated repayment schedule is established and at least one payment is received, or
- (3) other arrangements satisfactory to the Department of Commerce are made.

Buy American-Made Equipment or Products - Applicants are encouraged that any equipment or products authorized to be purchased with funding provided under this program must be American made to the maximum extent feasible.

The total dollar amount of the indirect costs proposed in an application under this program must not exceed the indirect cost rate negotiated and approved by a cognizant Federal agency prior to the proposed effective date of the award or 100 percent of the total proposed direct cost dollar amount in the application, whichever is less.

If an application is selected for funding, the Department of Commerce has no obligation to provide any additional future funding in connection with the award. Renewal of an award to increase funding or extend the period of performance is at the total discretion of the Department of Commerce.

In accordance with Federal statutes and regulations, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, denied benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from the NOAA Climate and Global Change Program. The NOAA Climate and Global Change Program does not have direct TDD (Telephonic Device for the Deaf) capabilities, but can be reached through the State of Maryland supplied TDD contact number, 800-735-2258, between the hours of 8:00 am and 4:30 pm.